



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

RBW6705G03031-3G-5  
Job Sheet 168836



Part No: RBW6705G03031-3G-5 Job Qty: 1 ea

Part Name: Handle



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 11/23/17

Job Tracking No:

Due Date: 11/30/17

Created By: Marie Lajeunesse

Type: Stock

Description:

Note: DWG RBW6705G03031-3G Rev1 IPP Rev A 17.11.21 New issue DP Verify DD

Ship Via:

### Bill of Materials

### Job Routing

| Op No | Operation          | Qty   | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off    |
|-------|--------------------|-------|------------|----------|-----------|---------|-----------------------|-----------|-------------|
|       |                    |       |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |             |
| 90    | Start up Operation | 1 Ea  |            | 11/29/17 | 0.00      | 0.00    | Start Up Machining    |           | 17-12-1     |
| 110   | Lathe Conv         | 1 pcs |            | 11/30/17 | 0.00      | 0.25    | Lathe Conv-1          |           | 12          |
| 120   | QC                 | 1 pcs |            | 11/30/17 | 0.00      | 0.00    | QC2                   |           | 12          |
| 130   | QC                 | 1 pcs |            | 11/30/17 | 0.00      | 0.00    | QC8                   |           | 12 12/12/17 |
| 140   | Packaging          | 1 pcs |            | 11/30/17 | 0.00      | 0.00    | Packaging3 GA         |           | 12          |
| 150   | QC21-SA            | 1 Ea  |            | 11/30/17 | 0.00      | 0.00    | QC21                  |           | 12          |

Part Op 90 - See engineering for sign off on material change and black oxide.

Descriptions: 110 - 1-Machine as per DWG. DWG REV: 1 2-Buff one end of pin by .001" down over .75" long. 3-Deburr

### Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated | Std Qty |
|-----------------------|----------------|----------|-----------|-----------|---------|
| 90-Start up Operation | M304R.250      | 0        | 15        | 0         | 0       |

FM 135249-1

18

### Part Specifications

Specifications could not be found.

Plex 11/23/17 11:07 AM Dart.lajeunesse.marie

01551

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐**DART**  
AEROSPACE**DISPOSITION**

AGAINST DEPARTMENT/PROCESS

Work Order: \_\_\_\_\_  
Part No. \_\_\_\_\_  
NCR No. \_\_\_\_\_Rework ☐  
Scrap ☐  
Use-as-is ☐  
Suspected Unapproved ☐Skid-tube ☐  
Machining ☐  
Thermoforming ☐  
Large Fab ☐

Date: \_\_\_\_\_ Step #: \_\_\_\_\_

QTY Effective: \_\_\_\_\_

Description Work Order Deviation

**Dart Aerospace Ltd.**  
1270 Aberdeen Street  
Hawkesbury, ON K64 1K7  
CANADA  
TEL.: 1 613 632-5200  
Email: sales@dartaero.com  
www.dartaerospace.com**Root Cause****FAL**

|                    |                       |                        |                           |
|--------------------|-----------------------|------------------------|---------------------------|
| Environment        | No Re-verification    | Pressure/Forced        | Temperature/Cure          |
| Design             | Operator              | Bending                | Set-up                    |
| Doc/Data           | Offset/Setup          | Centre Not Concentric  | BOM/Route                 |
| Equip/Tooling      | Supplier              | Cracks                 | Broken/Damage/Defect      |
| Handling/Pre       | Training              | Crimp/Kink/Ripple/Wave | Inspection Incomplete/L   |
| Material           | Use for Testing       | Cuffs                  | Contamination             |
| Internal Transport | Poor Information      | Crushing               | Countersink               |
| Tribal Knowledge   | Rushing               | Heat Treat             | Cut Too Short             |
| LOA                | Product Improvement   | Wave/Twist in Tube     | Instructions Incomplete/L |
| Substation         | Process Improvement   | Marks/Chatter          | Drill Holes               |
| Past Expiry Date   | Manufacturing Process |                        |                           |
| Misidentified      | Past Due              |                        |                           |

OTHER: \_\_\_\_\_

**DART**  
AEROSPACE  
**S016552**

Handle

**PART NO: RBW6705G03031 - 3G - 5**

**Revision:**

**Operation: Start up Operation**

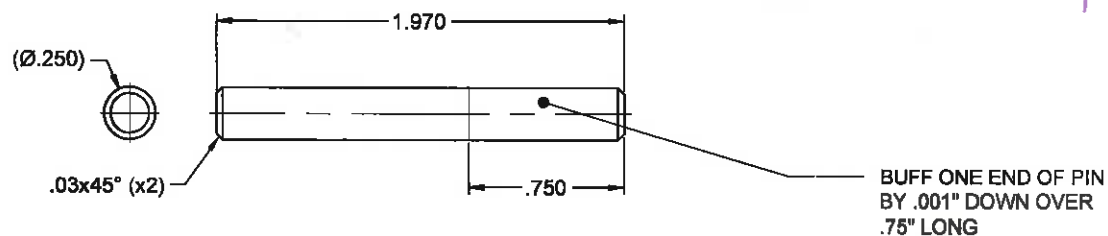
**Change No:**

Mfg Date: 12/02/17  
Job No: 168836

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| REVISIONS |                                                         |         |                  |
|-----------|---------------------------------------------------------|---------|------------------|
| REV       | DESCRIPTION                                             | DATE    | INITIAL APPROVED |
| 1         | ADDED NOTE TO BUFF ONE END OF PIN .001" OVER .75" LONG. | 2/12/13 | BM GE            |

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 168836 *MJS*  
*17-11-23*



|                                                                                                                             |                  |
|-----------------------------------------------------------------------------------------------------------------------------|------------------|
| <b>RED BARN MACHINE</b>                                                                                                     |                  |
| TITLE BLOCK SIMULATION TOOL,<br>M/R ACUATOR                                                                                 |                  |
| DWG NO. RBW6705G03031-3G-5                                                                                                  | REV 1            |
| UNLESS OTHERWISE SPECIFIED<br>DIMENSIONS ARE IN INCHES                                                                      |                  |
| TOLERANCES ON:                                                                                                              | METRIC REF.      |
| DECIMALS                                                                                                                    | XXmm ± .1mm      |
| .XXX ± .005                                                                                                                 | FRACTIONS ± 1/32 |
| .XX ± .01                                                                                                                   | ANGLES ± 5°      |
| .X ± .1                                                                                                                     |                  |
| UNLESS OTHERWISE SPECIFIED<br>1. BREAK ALL SHARP EDGES<br>.015 x 45° PR .015 R<br>2. DIMENSIONAL LIMITS APPLY AFTER PLATING |                  |
| SCALE NTS                                                                                                                   | DATE 1-28-10     |
| SHEET 4 of 4                                                                                                                |                  |

2846705603031-36-5

## Page 1 of 1

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79KJ

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

**WORK ORDER NON-CONFORMANCE / UPDATE**QA Closed: 2L Date: Oct 31/19Work Order update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
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| Work Order: <u>168836</u><br>Part No. <u>RBW/625603031-36-5</u><br>NCR No. <u>19-7669</u>                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <b>DISPOSITION</b><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input checked="" type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/>                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>AGAINST DEPARTMENT/PROCESS</b><br><table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Cross tube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input checked="" type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  | Skid-tube <input type="checkbox"/> | Cross tube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input checked="" type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Cross tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Water Jet <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                          | Engineering <input checked="" type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Small Fab <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                  | Quality <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Finishing <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                | Other <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Composite <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Supplier <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Date : <u>2017.12.01</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Step #: _____                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | QTY Effective : <u>1</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                              | MRB (QSI042) Approval<br><br><u>2017.12.01</u> |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| <u>-5 Handle manufacture process/material calls for Black Oxide Steel. To improve manufacture part was made of Stainless steel.</u>                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <u>Acceptable to make the part out of Stainless Steel M304R 250</u><br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | QC/QA Coordinator Approval<br><br><u>9-00 NOV 7, 2017</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Root Cause                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | FAULT CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Environment <input type="checkbox"/><br>Design <input type="checkbox"/><br>Doc/Data <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/><br>Handling/Pre <input type="checkbox"/><br>Material <input type="checkbox"/><br>Internal Transport <input type="checkbox"/><br>Tribal Knowledge <input type="checkbox"/><br>LOA <input type="checkbox"/><br>Substation <input type="checkbox"/><br>Past Expiry Date <input type="checkbox"/><br>Misidentified <input type="checkbox"/> | No Re-verification <input type="checkbox"/><br>Operator <input type="checkbox"/><br>Offset/Setup <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Training <input type="checkbox"/><br>Use for Testing <input type="checkbox"/><br>Poor Information <input type="checkbox"/><br>Rushing <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Manufacturing Process <input checked="" type="checkbox"/><br>Past Due <input type="checkbox"/> | Pressure/Forced <input type="checkbox"/><br>Bending <input type="checkbox"/><br>Centre Not Concentric <input type="checkbox"/><br>Cracks <input type="checkbox"/><br>Crimp/Kink/Ripple/Wave <input type="checkbox"/><br>Cuffs <input type="checkbox"/><br>Crushing <input type="checkbox"/><br>Heat Treat <input type="checkbox"/><br>Wave/Twist in Tube <input type="checkbox"/><br>Marks/Chatter <input type="checkbox"/> | Temperature/Cure <input type="checkbox"/><br>Set-up <input type="checkbox"/><br>BOM/Route <input type="checkbox"/><br>Broken/Damage/Defect <input type="checkbox"/><br>Inspection Incomplete/Unqualified <input type="checkbox"/><br>Contamination <input type="checkbox"/><br>Countersink <input type="checkbox"/><br>Cut Too Short <input type="checkbox"/><br>Instructions Incomplete/Unclear <input type="checkbox"/><br>Drill Holes <input type="checkbox"/> | Power Loss/Surge <input type="checkbox"/><br>Folio/Program <input type="checkbox"/><br>Grain <input type="checkbox"/><br>Weld <input type="checkbox"/><br>Wrong Stock Pulled <input type="checkbox"/><br>Out of Sequence <input type="checkbox"/><br>Off-set <input type="checkbox"/><br>Mislabeled <input type="checkbox"/><br>Fit/Function <input type="checkbox"/><br>Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                          | Positioned Wrong <input type="checkbox"/><br>Outside Dimensions <input type="checkbox"/><br>Over/Under tolerance <input type="checkbox"/><br>Part Incorrect <input type="checkbox"/><br>Part Lost/Missing <input type="checkbox"/><br>Part Moved <input type="checkbox"/><br>Drawing <input checked="" type="checkbox"/><br>Finish <input type="checkbox"/><br>Misread <input type="checkbox"/><br>Turning Sequence <input type="checkbox"/> |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| OTHER : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   |  |  |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |